CLAIMS:

1. Method of preparing a central venous line catheter for the use, said catheter having at least one substantially elongate structure configured for establishing central venous access, said structure having a proximal portion and a distal portion and defining at least a first lumen in communication with the exterior of the elongate structure at said proximal and distal portions, and at least one heat exchange element extending at least along the distal portion adapted to effect heat exchange with the central venous system, characterized by the method step of flushing the first lumen from its distal portion to its proximal portion with sterile saline.

2. Method according to claim 1, characterized in that the volume of the flushing sterile saline is at least 5 ccm.

3. Method according to claim 2, characterized in that a 5 ccm or larger syringe is used for flushing.

4. Method according to claim 2, characterized in that injection caps are clamped to the proximal portion of the first lumen.

5. A central venous line catheter, said catheter having at least one substantially elongate structure configured for establishing central venous access, said structure having a proximal portion and a distal portion and defining at least a first lumen in communication with the exterior of the elongate structure at said proximal and distal portions, and at least one heat exchange element extending at least along the distal portion adapted to effect heat exchange with the central venous system, characterized in that the catheter is manufactured by flushing the first lumen from its distal portion to its proximal portion with sterile saline.

6. The catheter of claim 5, characterized in that the volume of the flushing sterile saline is at least 5 ccm.

7. The catheter of claim 6, characterized in that a 5 ccm or larger syringe is used for flushing.

8. The catheter of claim 6, characterized in that injection caps are clamped to the proximal portion of the first lumen.

9. Method of operating a venous line catheter system, said system having a catheter having at least one substantially elongate structure configured for establishing central venous access, said structure having a proximal portion and a distal portion and defining at least a first lumen in communication with the exterior of the elongate structure at said proximal and distal portions, and at least one heat exchange element extending at least along the distal portion adapted to effect heat exchange with the central venous system, characterized in that a heating/cooling agent at a flow rate in a range of 150 – 450 milliliters per minute is fed through the heat exchange element.

10. Method according to claim 9, characterized in that the flow rate is about 240 milliliters per minute.

11. Method according to claim 9, characterized in that the temperature of the heating agent is between 38°C and 43°C.

12. Method according to claim 9, characterized in that the temperature of the cooling agent is between 1°C and 5°C.

13. Method according to claim 9, characterized in that the heat exchanging element is a balloon.

14. Method according to claim 13, characterized in that the balloon length is about 55-60 mm.

15. Method according to claim 9, characterized in that the heat exchanging element comprises a plurality of balloons.

16. Method according to claim 15, characterized in that the balloon length is about 55-60 mm.

17. Method according to claim 15, characterized in that three balloons are disposed in a consecutive order, a first balloon having a diameter of approximately 8-12 mm, a second balloon having a diameter of approximately 5-9 mm, and a third balloon having a diameter of approximately 4-6 mm.

18. Method according to claim 13, characterized in that the wall thickness of the balloon is between 35 µm and 70 µm.

19. Method according to claim 9, characterized in that the material from which the balloon is made is selected from the group: urethane, nylon, PE and PET.

20. Method according to claim 9, characterized in that the heat conductivity of the balloon is 0.1 to 1.5 Watt per meter x Kelvin.

21. Method according to claim 9, characterized in that the heating/cooling agent is a sterile saline.

22. A venous line catheter system, said system having a catheter having at least one substantially elongate structure configured for establishing central venous access, said structure having a proximal portion and a distal portion and defining at least a first lumen in communication with the exterior of the elongate structure at said proximal and distal portions, and at least one heat exchange element extending at least along the distal portion adapted to effect heat exchange with the central venous system, characterized by a pump feeding heating/cooling agent at a flow rate in a range of 150 – 450 milliliters per minute through the heat exchange element.

23. The catheter system according to claim 22, characterized in that the flow rate is about 240 milliliters per minute.

24. The catheter system according to claim 22, characterized in that the temperature of the heating agent is between 38°C and 43°C.

25. The catheter system according to claim 22, characterized in that the temperature of the cooling agent is between 1°C and 5°C.

26. The catheter system according to claim 22, characterized in that the heat exchanging element is a balloon.

27. The catheter system according to claim 26, characterized in that the balloon length is about 55-60 mm.

28. The catheter system according to claim 22, characterized in that the heat exchanging element comprises a plurality of balloons.

29. The catheter system according to claim 28, characterized in that the balloon length is about 55-60 mm.

30. The catheter system according to claim 28, characterized in that three balloons are disposed in a consecutive order, a first balloon having a diameter of approximately 8-12 mm, a second balloon having a diameter of approximately 5-9 mm, and a third balloon having a diameter of approximately 4-6 mm.

31. The catheter system according to claim 26, characterized in that the wall thickness of the balloon is between 35 µm and 70 µm.

32. The catheter system according to claim 22, characterized in that the material from which the balloon is made is selected from the group: urethane, nylon, PE and PET.

33. The catheter system according to claim 22, characterized in that the heat conductivity of the balloon is 0.1 to 1.5 Watt per meter x Kelvin.

34. The catheter system according to claim 22, characterized in that the heating/cooling agent is a sterile saline.

35. Method of using a central venous line catheter comprising:
at least one substantially elongate structure configured for establishing central venous access, said structure having a proximal portion and a distal portion,
at least one heat exchange element extending at least along the distal portion adapted to effect heat exchange with the central venous system,

a first lumen in communication with the exterior of the elongate structure at said proximal and distal portions, and
a second lumen through which a guidewire can extend,
characterized by the steps of
flushing a first chemical through the first lumen,
removing the guide wire from the second lumen, and
flushing a second chemical through the second lumen.

36. Method according to claim 35, characterized by the step of withdrawing the catheter for about 2-3 cm relative to the guidewire before removing said guidewire from the catheter.

37. Method according to claim 35, characterized in that the first chemical being the same as the second chemical.